

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) An apparatus for the catalytic cracking of hydrocarbonaceous feedstocks comprising:
 - (a) a first ~~narrower~~ riser ~~reactor~~ cracking section having a radius x, a means for feeding a hydrocarbon feedstock and a means for feeding cracking catalyst located in a lower portion thereof for selectively catalytically cracking said feedstock to gasoline;
 - (b) a second ~~wider~~ riser ~~reactor~~ cracking section having a radius y wherein the ratio of y:x ranges from about 1.1:1 to about 5.0:1 operatively connected to said first ~~narrower~~ riser ~~reactor~~ cracking section by a first diameter transition section for selectively catalytically cracking said gasoline formed in said first riser cracking section to olefins;
 - (c) a riser product conduit having an inlet operatively connected to said second ~~wider~~ riser ~~reactor~~ cracking section by a second diameter transition section and having an outlet operatively connected to a separator means for separating catalyst from cracked product; and
 - (d) a disengager vessel having an upper dilute phase, and lower dense phase, said upper dilute phase suitable for receiving cracked product gases and for supporting said separator means; and said

lower dense phase suitable for receiving catalyst from said separator means; said disengager vessel further comprising an outlet for removing separated cracked gases from said separator means.

2. (Original) An apparatus as defined in Claim 1 wherein the ratio of y:x ranges from about 1.25:1 to about 2.5:1

3. (Currently amended) An apparatus as defined in Claim 1 wherein said first diameter transition section operatively connects said first narrower riser reactor cracking section to said second wider reactor riser cracking section at an interior angle ranging from about 5° 185° to about 30° 210°.

4. (Currently amended) An apparatus as defined in Claim 3 wherein said interior angle ranges from about 8° 188° to about 20° 200°.

5. (Original) An apparatus as defined in Claim 1 wherein said riser product conduit has a radius of approximately x.

6. (Currently amended) An apparatus as defined in Claim 5 wherein said second diameter transition section operatively connects said riser product conduit to said second wider riser reactor cracking section at an interior angle ranging from about 5° 175° to about 30° 150°.

7. (Original) An apparatus as defined in Claim 1 wherein said riser product conduit further comprises a quench injection means.

8. (Original) An apparatus as defined in Claim 1 wherein said separator means comprises a cyclone separator.

9. (Currently amended) An apparatus as defined in Claim 1 wherein said

lower dense phase of said disengager vessel is equipped with a means for stripping hydrocarbons from the catalyst ~~particles~~ received from said separator means.

10. (Currently amended) An apparatus as defined in Claim 1 further comprising a regenerator vessel comprising a means for receiving spent catalyst from said lower dense phase catalyst bed of said disengager vessel, means for regenerating said catalyst, and means for recycling regenerated catalyst to said first narrower riser ~~reactor~~ cracking section.

11. Withdrawn.

12. Withdrawn.

13. Withdrawn.

14. Withdrawn.

15. Withdrawn.

16. Withdrawn.

17. Withdrawn.

18. Withdrawn.

19. Withdrawn.

20. Withdrawn.

21. Withdrawn.

22. Withdrawn.